



# Product Data Sheet

G 'Gas-shielded metal-arc welding'

# Purus 46 CF

Prepared by P-O Oskarsson	Qualified by P-O Oskarsson	Approved by Jose Abal Lopez	Reg no EN007617	Cancelling EN007612	Reg date 2017-09-19	Page 1 (2)
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## GENERAL

A non copper coated G4Si1/ER70S-6 solid wire for GMAW of carbon-manganese steels. Purus 46 CF is particularly suited to be used in general construction, automotive components and mobile machinery industries. It has a slightly higher manganese and silicon content than Purus 42 CF to increase the weld metal strength. The wire may be welded with either a gas mixture or with pure CO<sub>2</sub> as shielding gas. Purus 46 CF is designed to give a clean weld bead with a minimum of silica islands, low fumes and extremely low spatter levels. The wire is suitable for robotic applications at high deposition rates.

**Shielding Gas:** M20, M21, C1 (EN ISO 14175)    **Alloy Type:** Carbon-manganese steel (Mn/Si-alloyed)

## CLASSIFICATIONS Weld Metal

EN ISO 14341-A    G 42 3 C1 4Si1  
EN ISO 14341-A    G 46 4 M21 4Si1

## APPROVALS

CE                      EN 13479  
VdTÜV                19262

## CLASSIFICATIONS Wire Electrode

EN ISO 14341-A    G 4Si1  
SFA/AWS A5.18    ER70S-6

## CHEMICAL COMPOSITION

### Wire/Strip (%)

	Min	Max
C	0.06	0.14
Si	0.80	1.15
Mn	1.60	1.85
P		0.025
S		0.025

## MECHANICAL PROPERTIES OF WELD METAL

### All Weld Metal

Properties	EN 80Ar/20CO <sub>2</sub> (M21)			EN CO <sub>2</sub> (C1)			AWS CO <sub>2</sub> (C1)	
	Min	Max	Typ	Min	Max	Typ	Min	Typ
As welded								
As welded								
Rp0.2 (MPa)							400	450
ReL (MPa)	460		475	420		450		
Rm (MPa)	530	680	585	500	640	560	480	560
A4 (%)							22	29
A5 (%)	20		26	20		26		
Charpy V at 20°C (J)			130			120		
Charpy V at -30°C (J)			70	47		70	27	70
Charpy V at -40°C (J)	47		60					



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### ECONOMICS & CURRENT DATA

Dimension (mm) Ø	Current (A)		W Nom	η Nom	H		Feed			U	
	Min	Max			Min	Max	Min	Max	Min	Max	
1.0	80	300	16	96	1.0	5.5	2.7	15	18	32	
1.2	120	380	18	97	1.3	8.0	2.5	15	18	35	

**W** = Gas consumption (l / min)

**η** = Recovery, g weld metal / 100g wire (%)

**H** = Deposit rate (kg weld metal / hour arc time)

**Feed** = Feeding rate (m/min)

**U** = Arc voltage (V)